



Research Paper

Anxiety and Depression among Non Covid and Covid Positive pregnant Women during the Pandemic

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Abstract

Anxiety and Depression among the vulnerable population have increased during COVID 19 pandemic, pregnancy during this pandemic is an additional stressor. This study aimed to assess anxiety and depression among COVID positive and non COVID antenatal women who were receiving care in Obstetrics and Gynaecological department of a tertiary care hospital in Tamilnadu. A descriptive study was carried out with consecutive sampling method for COVID positive antenatal women and systematic random sampling for non COVID antenatal women. A sample size of 77 antenatal women in each group who fulfilled the inclusion criteria were taken for the study. The study was conducted in the OG department of a tertiary hospital in Tamilnadu, India. The COVID positive and non COVID antenatal women were recruited for the study beyond 28 weeks of pregnancy. An informed consent was obtained and GAD 7 questionnaire for anxiety and PHQ9 Questionnaire for depression were administered to the antenatal women. The results showed that the mean anxiety score in the non COVID group was 4.909 and the COVID group was 3.558, there was a statistically significant difference in the anxiety among both the groups with the p value of 0.027. The mean score of depression among the non COVID antenatal women was 5.48 and the mean score among the COVID positive antenatal women was 4.45. However, there was no statistical significant difference in the depression scores among both the groups. There was a significant statistical association between depression and occupation among COVID positive antenatal women and a statistical significant difference was seen between depression and education among non COVID antenatal women. The result of the study revealed that most of the women in both the groups had mild to moderate anxiety and depression, anxiety and depression among the non COVID antenatal women was higher compared to the COVID positive antenatal women. COVID 19 affected the mental health of pregnant women, identifying and addressing mental health problems will help in providing optimal antenatal care during the pandemic.

Received 01 Oct., 2022; Revised 08 Oct., 2022; Accepted 11 Oct., 2022 © The author(s) 2022.
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I. Background Of The Study

Pregnancy is a time of joy at the same time it is a stressful and difficult time too. It brings lots of physiological and psychological changes in women. It is the most vulnerable period for development of anxiety and depression. The prevalence of antenatal depression ranges from 7 to 20 %.¹ Antenatal anxiety and depression are significant risk factor for postnatal depression.²

SARS CoV2 pandemic has become a threat to the entire mankind. Pregnancy is not an exception. During a pandemic there is always a chance of neglecting psychological wellbeing of a patient and the health care focuses on the physical wellbeing. Many studies focus on physical effects of the pandemic and possibility of vertical transmission from mother to the fetus but less importance is given to the psychological effects. Pregnant women express greater levels of anxiety and depression during the pandemic.⁵

A cross sectional study was done among eleven COVID 19 positive women in China over a period of 11 weeks. The anxiety scores assessed by GAD 7 were high in the first quarter of the period. Gradually it reduced at the later quarter with the availability of information on the pandemic, reassurance through social media by the health care professionals and the rate of discharges from the hospital, this shows that the study results were reassuring and the patients did not have much of psychological morbidity.³

Another cohort study observed that 10.9% of pregnant women with COVID 19 had clinically significant symptoms of anxiety and depression.⁴ In China after declaration of COVID 19 pandemic 29.6% of pregnant women had depressive symptoms.⁵

The above studies show that pregnant women go through a very difficult psychological phase with this current pandemic. It might be a transient period not similar to major depressive disorder, but it should not be overlooked. Psychological wellbeing not only benefits the mother it significantly contributes to the health of the baby too.

The health care professionals should be sensitive to the psychological concerns of the pregnant women and support the mental wellbeing of the women during this difficult time. It is important to screen women for depression and anxiety especially during pregnancy.

This study aimed at finding the anxiety and depression among COVID positive and non COVID positive pregnant women coming to OG Department of a tertiary care hospital, Tamilnadu, India . The results of the study will be an eye opener for the health care professionals and will make them more empathetic, reassuring and concerned to the psychological need of the pregnant women.

Objectives of the study

- To assess Anxiety among COVID positive and non COVID antenatal women.
- To assess Depression among COVID positive and non COVID antenatal women.
- To compare anxiety and depression between COVID positive and non COVID antenatal women.
- To associate anxiety and depression of COVID positive and non COVID antenatal women with selected demographic and clinical variables.

II. METHODS

A descriptive study was conducted over a period of 6 months to assess the anxiety and depression among COVID positive and non COVID antenatal women in OBG department of a tertiary care hospital. The participants for COVID group was selected by consecutive sampling method and for non COVID group the participants were selected by systematic random sampling method. A sample size of 77 antenatal women in each group who fulfill the inclusion criteria were selected. GAD 7 Questionnaire on Anxiety and PHQ 9 for Depression was administered to the COVID and non COVID antenatal women after an informed consent. The data was analyzed using descriptive and inferential statistics.

III. RESULTS

The study reveals that the mean age group of antenatal women in both the groups is around 27 and maximum of 57.1% (44) belonged to urban locality in non-COVID group and 79.2% (61) belonged to rural locality in COVID group. Around 66.2% in non COVID group and 51.9% among COVID group belong to joint family. Majority of antenatal women in both the group (53.2% in non COVID and 63.6% in COVID group) were primi women. None of the women in both the groups had previous experience with any pandemic disease. Around 57.1% of women were graduates and 20.8% were post graduates in non COVID group. About 39% of women were graduates and 22.1% were postgraduates and 22.1% women had secondary level education in COVID group. Almost 76.6% in both the groups were housewives. Around 66.3% of women in non COVID group and 65% of women in COVID group had their income less than Rs. 25000/ per month.

Table 1
Distribution of antenatal women according to anxiety in both the groups

S.No	Anxiety	Non-COVID (n – 77)		COVID (n -77)	
		n	%	n	%
1.	<i>Mild</i>	51	66.2	61	79.2
2.	<i>Moderate</i>	16	20.8	11	14.3
3.	<i>Moderately Severe</i>	9	11.7	4	5.2
4	<i>Severe</i>	1	1.3	1	1.3

Table 1 shows that maximum of 66.2% (51) in the non COVID group of antenatal women and 79.2% (61) of antenatal women among COVID group had mild anxiety. About 11.7% (9) in non COVID group and 5.2% (4) in COVID group have moderately severe anxiety. Around 1.3% (1) had severe anxiety in both the groups.

Table 2
Distribution of antenatal women according to depression in both the groups

S.No	Depression	Non-COVID (n-77)		COVID (n-77)	
		n	%	n	%
1.	<i>Mild</i>	46	59.7	51	66.2
2.	<i>Moderate</i>	19	24.7	19	24.7
3.	<i>Moderately Severe</i>	11	14.3	3	3.9
4	<i>Severe</i>	1	1.3	4	5.2

Table 2 shows that maximum of 59.7% (46) in the non COVID group of antenatal women and 66.2% (51) of antenatal women among COVID group had mild depression. About 14.3% (11) in non COVID group had moderately severe depression only and 3.9% (3) in COVID group have moderately severe depression. Around 1.3% (1) had severe depression in non COVID group and 5.2% (4) had severe depression among COVIDgroup of antenatal women.

Table 3
Comparison of mean scores of anxiety between the non-COVID and COVID group of participants.

Groups	Mean	Standard Deviation	t-value	P-value
Non-COVID (n -77)	4.9091	4.52	0.10	0.027*
COVID (n-77)	3.1558	3.76		

Table 3 infers that there is a statistical significant difference between the mean scores of both the groups with p value less than 0.05. The mean score of non COVID group for anxiety was (4.9091) more than the COVID group (3.1558).

Table 4
Comparison of mean scores of depression between non-COVID and COVID group of participants.

Groups	Mean	Standard Deviation	t-value	P-value
Non-COVID (n-77)	5.48	4.56	0.158	0.879
COVID (n-77)	4.45	4.41		

Table 4 infers that the mean score of depression in non COVID group is (5.48) higher than the COVID group (4.45) but there is no statistical significant difference between the mean scores among both the groups.

Association between anxiety and selected demographic and clinical variables among COVID positiveantenatal women

The study reveals that there is an association between anxiety and occupation of the antenatal women among COVID positive group with a value of 0.054, where the level of significance is set >0.05. There is no association between anxiety and other demographic and clinical variables.

Association between anxiety and selected demographic and clinical variables among non COVID antenatal women

The study infers that there is no significant association between anxiety and any demographic and clinical variables in non COVID antenatal women.

Association between depression and selected demographic and clinical variables among COVID positive antenatal women

The study infers that there is a significant association between depression and occupation among COVID positive antenatal women with a value of 0.038, and no significant association between depression and other demographic and clinical variables.

Association between depression and selected demographic and clinical variables among non COVID antenatal women

The study reveals that there is a significant association between depression and education among non COVID group of antenatal women with a p value of 0.011. There is no significant association between depression and other demographic and clinical variables.

IV. Discussion

The study focuses on assessing the anxiety and depression among COVID and non COVID antenatal women. Pregnancy is a vulnerable time and women during this time face lots of challenges not only physically but also psychologically. These challenges can cause more anxiety and depression among antenatal women. Many studies have been done among pregnant women but there are only few studies that are done on women with COVID 19 infection. This study aimed not only in assessing the psychological aspects but wanted to identify the difference in both COVID and non COVID group of antenatal.

Anxiety

In this study the mean age group of antenatal women in both the groups is around 27 and it reveals that among COVID positive antenatal women only 5.2% had moderately severe anxiety and 14.3% had moderate anxiety and over 79.2% women had only mild anxiety. However, in the non COVID group we find that 28.8% of women had moderate anxiety and 11.7% had moderately severe anxiety and around 66.2% had mild anxiety. A study that was done in a tertiary care hospital, New Delhi on anxiety and depression among women with COVID 19 infection during childbirth reveals that 5.3% of COVID positive antenatal women experienced moderate symptoms of anxiety and over 49.85% and 49.79% had minimal and mild anxiety.⁶

The above finding is also supported by a study done by Janik et al, as assessment of the level of COVID 19 anxiety among pregnant women in Poland. The results showed that 10% of antenatal women with COVID had moderately severe and 3.5% had severe anxiety symptoms and around 49% had mild symptoms.⁷

The present study shows that the mean anxiety score among non COVID antenatal women is 4.909 and among COVID positive antenatal women is 3.155, the above statistics reveals that the non COVID antenatal women experience more anxiety than the COVID group of antenatal women. There is a statistical significant difference in the anxiety level with p value 0.027(p=0.05) between both the groups. The above finding is supported by a study done by P. Kotabagi et al that the mean anxiety score is 2.71 among COVID positive women and 2.78 among non COVID mothers with the p value of 0.9, which is statistically significant. The study concluded that the COVID positive antenatal women are less anxious than the non COVID antenatal women.³

In this study there is a statistical significant association between anxiety and occupation among COVID positive antenatal women and there is no association with anxiety and other socio demographic data in COVID and non COVID group of antenatal women.

The present study and the supporting studies reveal that the anxiety among the non COVID antenatal women are more, this could be due to limiting the antenatal care services, stopping face to face prenatal visits and changing birth plans ect.. which should be further explored.

Depression

The present study reveals that among COVID positive antenatal women 66.2% had mild depression, 24.7% had moderate depression, 3.9% had moderately severe depression and 5.2% had severe depression. Among non COVID antenatal women 59.7% had mild depression, 24.7% had moderate depression, 14.3% have moderately severe depression and around 1.3% had severe depression. This finding is supported by a study done by Bachani et al, where 69.13% of antenatal women with COVID had mild depression.³

In the present study the mean depression score among non COVID antenatal women is 5.48 and in the COVID group is 4.45. The mean score of depression is higher in the non COVID group of antenatal women, however there is no statistical significant difference between the groups. This above finding is supported by the study done by Kotabagi et al, that the mean scores of PHQ for depression did not show any statistical significant difference between both the COVID and non COVID antenatal women.⁶

The result of the present study is supported by a study done by Maharlouei et al on depression and anxiety among pregnant women during the pandemic, the study concluded that, abnormal levels of depression and anxiety were present among antenatal women during the COVID 19 pandemic.⁸

The present study reveals that there is a statistical significant association between depression and education among non COVID antenatal women with p value of 0.011 and there is no significant association between depression and any other socio demographic variables among COVID and non COVID antenatal women. However, the study reveals that the depression scores are more in the non COVID group of antenatal women than in the COVID group. This could be because, the COVID positive antenatal women would have received good health care, adequate reassurance and explanation during admission in the hospital whereas the non COVID group was left with less information, restrictions on regular antenatal visits to clarify their doubts and influence of the social media on the pandemic. So, lots of researches need to be done to explore on the factors increasing anxiety and depression in both the groups.

V. Conclusion

When pandemic hits usually there is a tendency for the health care professional to look into the physical wellbeing and treat physical sickness. The psychological aspect is often ignored and many patients end up with psychological morbidity. Routine screening for psychological problems should be a part of health care assessment to cater to holistic care of patients. The evidence from this study suggests that it is essential to provide appropriate psychological support to pregnant women during the pandemic to protect their mental health and minimize long term effects on child development. The results signify that the non COVID women had more anxiety and depressive symptoms than the COVID positive pregnant women. Health care professionals should establish comprehensive treatment plan for pregnant women who are vulnerable population to prevent psychological morbidity. As much as taking care of the physical needs, psychological needs also should be given importance. Early identification of symptoms is important to formulate necessary strategies to reduce psychological complications.

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